

everyone would prefer the less-invasive one. This issue is not quantifiable; on the other hand, suggesting the superiority of the OPCABG over PCI for a single-vessel disease on the basis of a non-updated analysis may be misleading for those physicians aiming at explaining a complete “state of the art.”

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## Fixed subaortic stenosis

### To the Editor:

We read with great interest the article entitled “Geometry of the Left Ventricular Outflow Tract in Fixed Subaortic Stenosis and Intact Ventricular Septum: An Echo-

cardiographic Study in Children and Adults.”<sup>1</sup> We have a few points to discuss.

First, we agree with the authors in choosing the wider mitral–aortic separation, steeper aortoseptal angle, smaller left ventricular outflow tract width, aortic valve dextroposition, increased left ventricle wall thickness, increased septal thickness, and indexed left ventricular end-diastolic and end-systolic diameters as the echocardiographic parameters to check in cases of subaortic stenosis.

Second, we think that left ventricular outflow tract obstruction in cases of Shone complex is a true challenge. We prefer not to intervene early, giving the heart and body time to grow, which is contrary to the general preference to intervene early in the other cases of subaortic stenosis. Discrete subaortic stenosis can be cured in most patients by membranectomy associated with myotomy or myectomy. Because the anatomic substrate is not addressed by these surgical techniques, however, recurrences are likely during long-term follow-up, particularly in patients who have undergone previous operations for an aortic coarctation and in patients with less than optimal relief of the left ventricular outflow tract gradient. In this subset of patients, the optimal surgical technique remains to be described. Intraoperative recording of the left ventricle–aorta gradient by transesophageal echocardiography or pressure measurement remains an important tool for more aggressive subaortic resection in case of a residual gradient greater than 30 mm Hg. According to the size and function of the aortic valve, the Ross–Konno procedure or the modified Konno procedure by patch septoplasty seems to be the appropriate surgical technique. Tunnel subaortic stenosis represents a more severe and challenging cause of left ventricular outflow tract obstruction, particularly when symptoms start early in life. Although multivariate analysis did not demonstrate this anatomic form as an independent risk factor for overall mortality and recurrence rates, in univariate analyses it was associated with a higher overall mortality rate and reoperation rate, along with other factors of the Shone complex (ie, hypoplastic aortic anulus, mitral stenosis, and existence of coarctation).<sup>2</sup>

Third, we have a remark on Table 3. We expected the indexed left ventricular end-systolic dimension to decrease postoperatively especially in group 1, which was not

the case. The left ventricular end-systolic dimension increased in group 1, although it decreased in groups 2 and 3. Do you have an explanation?

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## Reply to the Editor:

We thank Drs Sersar, Jamjoom, and Baslaim for their comments on our study.<sup>1</sup>

Shone complex was originally described as comprising 4 coexisting obstructive lesions: Supravalvar ring of the left atrium, “parachute” deformity of the mitral valve, subaortic stenosis, and coarctation of the aorta are considerably more challenging than is an isolated subaortic stenosis.

On the basis of mean values, there are some differences in the left ventricular end-systolic dimension between groups, despite being statistically insignificant. This may be attributable to differences in left ventricular compliance to changes in loading conditions. This remains to be reexamined in a larger group of patients.

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